

## CLAIMS

What is claimed is:

1. A structure (10, 20) comprising at least one proportional variable resistor (24) suitable for electrically measuring unidirectional misalignment of stitched masks in etched interconnect layers, said structure comprising at least a first mask (10) and a second mask (20) that when superimposed comprise at least two test pads (14, 16) and interconnects (12, 22) the resistance between (24) which can be measured.
2. The invention according to claim 1 comprising at least one directly proportional variable resistor.
3. The invention according to claim 1 comprising at least one inversely proportional variable resistor.
4. The invention (30, 50) according to claim 1 comprising at least one stick type (32, 24, 36, 38) interconnect.
5. The invention according (60, 70) to claim 1 comprising at least one hook type interconnect (62, 72).
6. A system for electrically measuring unidirectional misalignment of stitched masks in etched interconnect layers, said system comprising at least one proportional variable resistor comprising a reference mask comprising at least two test pads and a second mask comprising at least one interconnect; and a probe for testing the resistance between said interconnect of said reference mask and said interconnect of said second mask when said masks are superimposed.
7. The invention according to claim 6, the at least one interconnect of said reference mask comprising at least one stick type interconnect.
8. The invention according to claim 6, the at least one interconnect of said reference mask comprising at least one hook type interconnect.
9. The invention according to claim 6, the at least one interconnect of said second mask comprising at least one stick type interconnect.
10. The invention according to claim 6, the at least one interconnect of said second mask comprising at least one hook type interconnect.
11. The invention according to claim 6, said system comprising at least one inversely proportional variable resistor.
12. The invention according to claim 6, said system comprising at least one directly proportional variable resistor.

13. A method of measuring stitched mask misalignment in etched interconnect layers comprising the steps of: providing a reference mask comprising at least two test pads; providing a second mask comprising at least one interconnect; superimposing said reference mask and said second mask to provide at least one proportional variable resistor; electrically measuring the resistance of said at least one proportional variable resistor.

14. The method according to claim 13 further comprising the step of establishing an optimum resistance between said test pads.

15. The invention according to claim 14 comprising the further steps of comparing a measured resistance to said optimum resistance and adjusting the position of said masks to alignment.